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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

HEWITT, JAMES M

ART UNIT PAPER NUMBER

3679

DATE MAILED: 10/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/782,669

Applicant(s)

MUHAMMAD ET AL.

Examiner

James M. Hewitt

Art Unit

3679

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 2/19/04, 8/5/04 and 7/21/05.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>8/5/04 & 7/21/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

Claims 2, 5, 9-12 and 17-22 are objected to because of the following informalities:

In claim 2 line 3, it is unclear as to how the recited radially inwardly extending lip relates to the radially inwardly extending protrusion recited in claim 1.

In claim 5 lines 1-2, it is unclear as to how the recited resilient sealing flange relates to the internal retainer arms recited in claim 1.

In claim 9 line 4, "portion" should be "section".

In claim 9 line 5, "portion" should be "section".

In claim 9 line 6, "portion" should be "section".

In claim 10 lines 1-2, it is unclear as to how the recited third section relates to the transition recited in claim 9.

In claim 10 line 3, the phrase "of the first end" should be deleted for clarity.

In claim 10 line 4, "10" should be deleted.

In claim 11 line 1, "internal" should be "inner".

In claim 17 line 2, "a" should be inserted before "circumferential".

In claim 20 line 7, "the cavity" lacks proper antecedent basis.

In claim 21 line 2, "a" should be inserted before "circumferential".

Appropriate correction is required.

Claims 1-25 are objected to under 37 CFR 1.75(g), which states "The least restrictive claim should be presented as claim number 1."

Claims 1-25 are objected to under 37 CFR 1.75(i), which states "Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation."

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 23 is rejected under 35 U.S.C. 102(b) as being anticipated by Usui et al (US 4,948,180).

In Figures 1-4, Usui et al discloses a retainer member for releasably securing a male member to a female member, the retainer member including: a joining member having a central opening (10); a plurality of circumferentially spaced resilient internal retainer arms (5) extending from a first side of the joining member and arranged around the central opening thereof; and an annular outer flange (9) extending from the first side of the joining member and radially spaced outward from the internal retainer arms, the outer flange having a distal end remote from the joining member defining an radially inwardly extending protrusion.

Claims 23-24 are rejected under 35 U.S.C. 102(b) as being anticipated by McNaughton et al (US 5,303,963).

In Figures 1-3, McNaughton et al discloses a retainer member for releasably securing a male member to a female member, the retainer member including: a joining member (53) having a central opening; a plurality of circumferentially spaced resilient internal retainer arms (54) extending from a first side of the joining member and arranged around the central opening thereof; and an annular outer flange (57) extending from the first side of the joining member and radially spaced outward from the internal retainer arms, the outer flange having a distal end remote from the joining member defining an radially inwardly extending protrusion. As is evident in Figure 3, at least two semi-circumferential tooling openings are formed through the external flange (between the flanges 57) near the radial joining member for (capable of) receiving opposed ends of a removal tool.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Olson (US 6,447,024) in view of Kaminski et al (US 2003/0168856 A1).

With respect to claim 1, Olson discloses a connector assembly comprising: a male member having an circumferential external shoulder (64) on an outer surface thereof; a female member (14) having a cavity defined by an inner circumferential wall for receiving the male member, the cavity extending from a first end to an interior portion of the female member, the circumferential wall defining an internal shoulder, the tubular female member having a circumferential external shoulder (see Figure 1) on an outer surface thereof; and a retainer member (12) surrounding a portion of the male member, the retainer member including a plurality of circumferentially spaced resilient internal retainer arms (see Figure 3), the internal retainer arms each having a distal end for simultaneously engaging the male member external shoulder and the female member internal shoulder when the male member is within the female member (see Figure 2). Olson fails to teach the claimed external flange. Kaminski et al teaches a similar pipe coupling comprising an internal cylindrical section connected by a joining member to an annular external retainer flange, the external flange being radially spaced from the internal section and having a distal end defining a radially inwardly extending protrusion for engaging the female member external shoulder when the male member is within the female member. In view of Kaminski et al's teaching, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Olson to include an external flange in order to better retain the retainer member on the female member.

With respect to claim 2, wherein the external flange includes a plurality of axial openings dividing the external flange into a plurality of resilient axially extending

external retainer fingers each having a radially inwardly extending lip for engaging the female member external shoulder.

With respect to claim 3, Kaminski et al fails to teach at least two semi-circumferential tooling openings are formed through the external flange near the radial joining member for receiving opposed ends of a removal tool. The examiner takes official notice of tool openings on a flange pipe coupling component in order to facilitate removal.

With respect to claim 4, wherein the joining member is disc shaped having a central opening through which the male member extends, the joining member having a first surface for engaging the first end of the female member. Refer to Figure 2.

With respect to claim 5, wherein the joining member includes a resilient sealing flange extending axially therefrom and surrounding the central opening for engaging the male member.

With respect to claim 6, wherein the distal ends of the internal retainer arms are adapted to be compressed between the male member external shoulder and the female member internal shoulder when the male member is within the female member to create an interference fit therebetween. Refer to Figure 2.

With respect to claim 7, wherein the distal ends of the internal retainer arms are angled radially outward and each include opposite facing first and second surfaces for engaging the male member external shoulder and the female member internal shoulder, respectively. Refer to Figures 2 and 3.

With respect to claim 8, Olson fails to teach that the retainer member is formed as a unitary structure from resilient plastic. Olson employs metal to form his retainer. It would have been obvious to one having ordinary skill in the art at the time the invention was made to form Olson's retainer member of plastic, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice.

With respect to claim 9, wherein the outer surface of the female member is defined by an outer annular wall having a first section and a second section, the first section being located between the first end and the second section and having an outer diameter greater than that of the second section, a transition between the first portion and the second portion defining the female member external shoulder, wherein the external flange extends axially along the first portion. Refer to Figure 1.

With respect to claim 10, wherein the outer annular wall includes a third section that extends from the first end to the first section, the diameter of the third section increasing from the first end to the first section of the first end for expanding the distal end of the external flange radially outward as the retainer member is slid onto the female member. Refer to Figure 1.

With respect to claim 11, wherein the internal circumferential wall includes an annular groove (26) formed therein and having first and second substantially opposed sides, the first side being closer to the first end than the second side, the first side defining the female member internal shoulder.

With respect to claim 12, wherein the second side of the annular groove defines a further female member internal shoulder (27) for engaging the male member external shoulder to prevent insertion of the male member into the female member beyond a predetermined point.

With respect to claim 13, wherein the joining member includes a central opening through which the male member extends, and the male member includes a further circumferential external shoulder (defined by 46) on the outer surface thereof in a location that is on an opposite side of the central opening than the female member when the male member is within the female member, the further circumferential external shoulder having a diameter larger than that of the central opening.

With respect to claim 14, wherein the joining member includes a resilient sealing flange (82) about a circumference of the central opening and extending axially towards the further circumferential external shoulder. Refer to Figure 2.

With respect to claim 15, wherein the external flange extends a greater axial distance from the joining member than the internal retainer arms.

With respect to claim 16, refer to the above rejection of claim 1.

With respect to claim 17, wherein a diameter of the female member outer annular wall decreases at circumferential shoulder that is spaced apart from and faces a substantially opposite direction than the first end, the outer annular flange of the retainer member including a radially inward projection at an end thereof adapted to engage the circumferential shoulder when the male member is joined to the female member.

With respect to claim 18, wherein the outer flange includes a plurality of semi-circular circumferentially spaced resilient outer retainer arms, the radially inward projection including a lip on each of the outer retainer arms. Refer to Kaminski et al.

With respect to claim 19, wherein the outer retainer arms are adapted to radially deflect outwards when passing over the female member outer wall. Refer to Kaminski et al.

With respect to claim 20, refer to the above rejections of Olson in view of Kaminski et al.

With respect to claim 21, wherein a diameter of the female member outer annular wall decreases at circumferential shoulder that is spaced apart from and faces a substantially opposite direction than the first end, the outer retainer means including a radially inward projection at an end thereof adapted to engage the circumferential shoulder when the male member is joined to the female member.

With respect to claim 22, wherein the interior retainer means includes a plurality of circumferentially spaced resilient internal retainer arms and the outer retainer means includes an annular external retainer flange radially spaced from the internal retainer arms and connected thereto by a radial joining member, the internal retainer arms each having a distal end for simultaneously engaging the male member increased diameter circumferential portion and the side of the female member annular groove when the male member is within the female member. Kaminski et al fails to teach at least two semi-circumferential tooling openings formed through the external flange near the radial joining member for receiving opposed ends of a removal tool. The examiner takes

official notice of tool openings on a flange pipe coupling component in order to facilitate removal.

With respect to claim 23, Olson discloses a retainer member for releasably securing a male member to a female member, the retainer member including: a joining member having a central opening; a plurality of circumferentially spaced resilient internal retainer arms extending from a first side of the joining member and arranged around the central opening thereof. Olson fails to teach an annular outer flange extending from the first side of the joining member and radially spaced outward from the internal retainer arms, the outer flange having a distal end remote from the joining member defining an radially inwardly extending protrusion. Kaminski et al teaches a similar pipe coupling comprising an internal cylindrical section connected by a joining member to an annular external retainer flange, the external flange being radially spaced from the internal section and having a distal end defining a radially inwardly extending protrusion for engaging the female member external shoulder when the male member is within the female member. In view of Kaminski et al's teaching, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Olson to include an external flange in order to better retain the retainer member on the female member.

With respect to claim 24, Kaminski et al fails to teach at least two semi-circumferential tooling openings formed through the external flange near the radial joining member for receiving opposed ends of a removal tool. The examiner takes

official notice of tool openings on a flange pipe coupling component in order to facilitate removal.

With respect to claim 25, Olson and Kamiski et al fail to teach that at least portions of the internal retainer arms and the outer flange are coated with a friction reducing material layer. The examiner takes official notice of the use of a friction-reducing coating on a pipe coupling member in order to avoid slipping.

Claims 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Usui et al (US 4,948,180).

With respect to claim 24, Usui et al fails to teach at least two semi-circumferential tooling openings formed through the external flange near the radial joining member for receiving opposed ends of a removal tool. The examiner takes official notice of tool openings on a flange pipe coupling component in order to facilitate removal.

With respect to claim 25, Usui et al fail to teach that at least portions of the internal retainer arms and the outer flange are coated with a friction reducing material layer. The examiner takes official notice of the use of a friction-reducing coating on a pipe coupling member in order to avoid slipping.

Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over McNaughton et al (US 5,303,963).

With respect to claim 25, McNaughton et al fail to teach that at least portions of the internal retainer arms and the outer flange are coated with a friction reducing

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material layer. The examiner takes official notice of the use of a friction-reducing coating on a pipe coupling member in order to avoid slipping.

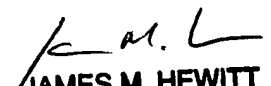
Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James M. Hewitt whose telephone number is 571-272-7084.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Stodola can be reached on 571-272-7087. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


JAMES M. HEWITT
PRIMARY EXAMINER